

REMARKS:

Claims 1, 2, 5, 6 and 8-10 are pending in the application. Claims 1, 2, 5, 6 and 8-10 are rejected.

Claims 2 and 10 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The rejections under 35 USC §112 of claims 2 and 10 are based upon a lack of antecedent basis for certain limitations in the claims. The language of claims 2 and 10 has been corrected by the foregoing amendment to eliminate the antecedent basis problem.

The drawings are objected to under 37 CFR §1.83(a). The Examiner states that, "the second length of flexible housing and the second ferrule joining the second flexible housing to the second end of the rigid tubing as recited in claims 6 and 9 are not shown on the drawings as filed." Applicant respectfully disagrees. The Examiner's attention is called to Fig. 3B. The second length of flexible housing is shown as element 352. The second ferrule joining the second flexible housing to the second end of the rigid tubing is shown as element 354. Please note that the same figure, Fig. 3B, also shows the first length of the flexible housing 44 and the first ferrule 350 joining the first length of flexible housing to the first end of the rigid tubing. Applicant recognizes that the second length of flexible tubing and second ferrule are not shown on any of the other figures besides Fig. 3B and apologizes for any confusion that may have occurred. Support for the second length of flexible housing and the second ferrule concept can be found on page 17 of the disclosure in the paragraph starting on line 21.

Applicant's claims 1, 2, 5 and 10 stand rejected under 35 USC §102(e) as being anticipated by Matsuo, U.S. Patent No. 6,349,614. The 102(e) rejections of Applicant's claims 1, 2, 5 and 10 are predicated upon Matsuo showing, "a straight length of axially and radially rigid tubing 654 having first and second ends," (Office Action, page 4, line 19) or, "a straight length of axially and radially rigid tubing 654 having an inner diameter greater than the diameter of the flexible cable," (Office Action, page 5, line 14). The element comprising a length of axially and radially rigid tubing receiving a flexible cable therein is one of the fundamental concepts of this application. Applicant's floating cable stop 70, "consists of an axially and radially rigid tube 348 made of a suitable material such as a metal like aluminum or stainless steel or an exceptionally rigid thermoplastic." (Disclosure, page 16, line 25).

## Claims as Pending After Amendment

1. A bicycle cable guide system for maintaining tension in a straight portion of a flexible cable extending between a cable actuated bicycle component and a cable actuator selectively applying tension to the flexible cable, the cable guide system comprising:

a straight length of axially and radially rigid tubing having first and second ends and an inner diameter greater than an outer diameter of the flexible cable receiving the straight portion of flexible cable;

a first axially fixed connector operatively associated with the first end of the rigid tubing; and

a second axially fixed connector operatively associated with the second end of the rigid tubing.

2. The bicycle cable guide system of claim 1 wherein the first axially fixed connector comprises a first length of flexible housing receiving the flexible cable and a ferrule between a first end of the housing and the first length of flexible housing.

5. A bicycle cable guide system for maintaining tension in a flexible cable extending between a cable actuated bicycle component and a cable actuator selectively applying tension to the cable, the bicycle cable guide system comprising:

a first length of flexible housing having a select outer diameter and an inner diameter greater than the diameter of the cable;

a straight length of axially and radially rigid tubing having an inner diameter greater than the diameter of the cable; and

a ferrule joining an end of the first length of flexible housing to a first end of the axially and radially rigid tubing.

6. The bicycle cable guide system of claim 5 further comprising:

a second length of flexible housing having substantially the same inner and outer diameter as the first length; and

a second ferrule joining an end of the second length of flexible housing to a second end of the straight length of axially and radially rigid tubing.

On the contrary, element 654 of Matsuo, relied upon by the Examiner is, "an outer casing," Matsuo, column 6, line 46. The Matsuo outer casing element is also identified as 38 and 54 on Figs. 1-9. The nature of the Matsuo outer casing is defined in only one place in the Matsuo disclosure. At column 1, line 15, it is stated, "the transmission typically is controlled by a control cable of the type having an inner wire that slides within an outer casing (e.g., a Bowden cable)." Bowden cables are named after Frank Bowden, founder of the Raleigh Bicycle Company. Conventional Bowden type cables consist of a flexible inner wire encased in a relatively incompressible but flexible outer housing. Typical bicycle cable, as described in Applicant's disclosure at page 17, line 7 are Bowden cables: "the conventional cable housing 44 is configured to bend along its length but to maintain a fixed length." Bowden cables have been the subject of numerous issued U.S. patents. Most recently, Gutschner, U.S. Patent No. 6,178,845, A Bowden Cable for Transmitting Tensile Forces. A Bowden cable as defined in Gutschner is composed of "an exterior flexible Bowden cable casing." Column 1, line 12, claim 1, line 7.

There is no indication in Matsuo that the casing 654 is axially and radially rigid. Furthermore, there is no teaching in Matsuo that an axially and radially rigid tube would be of any advantage to the depicted invention. On the contrary, the only teaching of Matsuo is that the casing 654 is a Bowden cable casing which is by definition flexible.

Claims 6, 8 and 9 stand rejected under 35 USC §103(a) as being unpatentable over Matsuo. The obviousness rejections of claims 6, 8 and 9 are based upon the argument that Matsuo shows a rigid tubing (element 654). As discussed in detail above, the casing (tubing) taught by Matsuo is a Bowden cable casing which by definition is flexible.

Accordingly, Applicant respectfully submits that claims 1, 2, 5, 6, and 8-10 are not anticipated or rendered obvious by Matsuo alone or in combination with any of the other art of record.

Finally, claims 1, 2, 5, 6, and 8-10 are rejected under the judicially created doctrine of double patenting over claims 1-8 of U.S. Patent No. 6,439,077. Applicant respectfully submits that the subject matter claimed in the instant application, although fully disclosed in U.S. Patent No. 6,439,077, is a separate and distinct invention from the subject matter of the referenced patent. In particular, U.S. Patent No. 6,439,077 claims a cable feed consisting of, among other elements, minor and major attachment barbs and minor and major elastometric boots. The cable

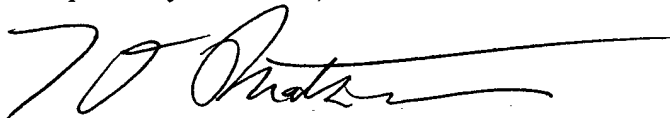
feed performs an entirely separate function in a cable actuated bicycle component from the floating cable stop of the present invention. The cable feed is shown as element 42 on Fig. 3B.

Although Applicant disputes that the floating cable stop of the present invention is covered by the claims of U.S. Patent No. 6,439,077, the double patenting issue is of no practical consequence. Both U.S. Patent No. 6,439,077 and the pending application claim priority to a common ancestor, therefore any patent issued on the pending application will expire no later than the expiration date of U.S. Patent No. 6,439,077.

Applicant further submits that claims 1, 2, 5, 6, and 8-10 are allowable over the art of record. Reconsideration of the claims as amended in light of the arguments contained herein and allowance of the claims are respectfully requested. A copy of the claims pending after amendment is attached for the Examiner's ease of reference.

This amendment and response constitutes a request for any needed extension of time and an authorization to charge all fees therefore to deposit account 19-5117, if not otherwise specifically requested. The undersigned hereby authorizes the charge of any fees created by the filing of this document or any deficiency of fees submitted herewith to be charged to deposit account 19-5117.

Respectfully submitted,



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Marked up version showing changes to claims under 37 C.F.R. § 1.121(c)

2. The bicycle cable guide system of claim 1 wherein the first axially fixed connector comprises a first length of flexible housing receiving the flexible cable and a ferrule between ~~the~~a first end of the housing and the first length of flexible housing.

6. The bicycle cable guide system of claim 5 further comprising:

a second length of flexible housing having substantially the same inner and outer diameter as the first length; and

a second ferrule joining an end of the second length of flexible housing to a second end of the straight length of axially and radially rigid tubing.

8. The cable guide system of claim 5 wherein the cable actuated bicycle component is a cable actuated disc brake caliper.

9. The bicycle cable guide system of claim 6 wherein the second length of flexible housing has an axial length that does not radially buckle under application of tension to the flexible cable under a normal range of operating tensions applied to the cable to actuate the cable actuated component.

10. The bicycle cable guide system of claim 5 wherein the axially and radially rigid tubing has an outer diameter substantially the same as the outer diameter of the axially rigid and radially flexible housing.